SPARK GAP

Vol. 40, Issue 1, January 2023 ***MARC - Serving Central Indiana Communities***

On Our MARC:

Happy New Year! Welcome to 2023! I hope your Holidays were enjoyable.

This Saturday, January 21 is our first MARC Club meeting of the new year. Please join us Saturday at 8 am at the Johnson County REMC building in Franklin. Our Guest Speaker via ZOOM will be Dave Spoelstra, N9KT, who will talk about the W9IMS Special Event Station and Remote Operation. Next month, our speaker will be our very own Bob Jones, KC9NJM talking about Weather. Storm Spotter Training: Thursday April 13th at 6 pm located at the Johnson County Sheriff's Department Training Center on Hospital Road in Franklin. No registration is required.

AuxComm is a FEMA program of specially trained Amateur Radio Operators serving in Auxiliary Communication as Auxiliary Communicators during a FEMA Declared Event/Emergency. The MARC group committed to AuxComm will be completing the required FEMA Online Courses IS-100, IS-200, IS-700, and IS-800 together over the next months during our monthly AuxComm meetings, which are generally held the first Wednesday of each month at 7 pm at the White River Township Fire Department Station #51 Training Room. You are all invited to participate if you desire. An email will be sent out about a week in advance with more detail. Join us if you desire.

73,
Tim
WC9G

JANUARY BIRTHDAYS

N9EJR --- JIM WILLIAMS
N9CHY --- CY YOUNG
KD9REP --- MICHAEL STRAUB
KB9JUE --- MATTHEW PAYNE
KC9WLL --- JOSEPH KREBSBACH
KC5GHM --- JOSEPH KIILU
WB9EZL --- EARL KING

CLUB DUES FOR 2023

It is that time of year for your membership dues for the Mid-State Amateur Radio Club. The annual membership dues is $25.00 per year and has not changed from last year.

Please check out the M.A.R.C. website and you may pay your dues via PayPal. This also a good time to update any of your information for club records such as license upgrade, change of address, contact information or call sign.

This is also a good opportunity for new amateurs to join our club and join in our club activities for 2023.

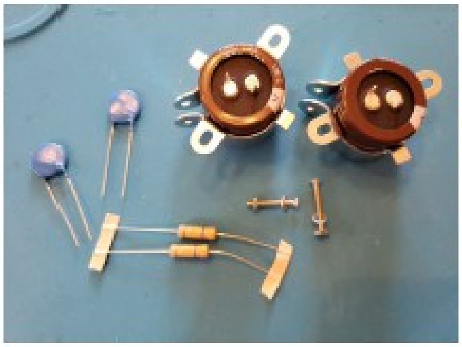
Please see Jacki Frederick, KI6QOG M.A.R.C. Treasurer

MARC

Saving the Boat Anchor
Kenwood Hybrid Recap Project
by W9HR

I have an old Kenwood TS-830s hybrid transceiver that has been in storage for the past several years. After successfully building an Unun and end-fed antenna that works well with my FT-991a, I thought I would give this venerable old boat anchor a try with it.

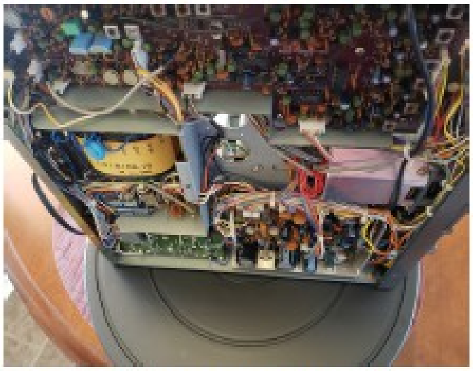
To my disappointment, I found that I could receive OK but the back-end would not tune up. Because of this, I no longer had an ability to transmit.



My first thought was I would just sell it for parts. However, after some research I found that that the two 500V electrolytic capacitors are among the first components to go after 30+ years since its manufacture. I purchased a capacitor kit online for $23. I figured I could still sell it for parts if a recap didn't fix the problem. I thought "What did I have to lose except some of my time and a few inexpensive parts?"

These are high voltage capacitors that could pack a wallop if not fully discharged. At first I was going to build a discharge wire by soldering a large resistor in-line with an alligator clip on one end and probe on the other. I later found it was cheaper to just buy a purpose built discharger for $14 which I did.

I first tested both caps with my multimeter and found, as I expected that they both were dead. There really was no need to discharge them but, just to be safe I attached my discharger. I was now confident I could work on it without worrying about getting a heart-stopping jolt.



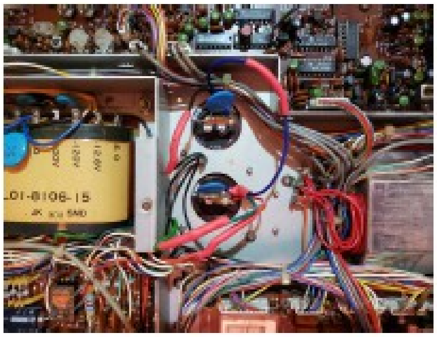
Since I needed to alternate working on the transceiver from both top and bottom, I placed it on its end on a 16 inch turnable. I could then easily get to the front and back by rotating the turnable -- no need to continually heft the 30lb chassis.

Instead of desoldering the wires that were connected to the old caps, I just clipped them off and stripped them. I took numerous photos of it prior to that so I could make sure I made the right connections on the new caps.

I then soldered the ceramic capacitors and bleed resistors to the terminals on the replacement 500V caps. I used a wire wrap tool to make a tight mechanical connection prior to soldering them. To make it easy to reconnect, I soldered pre-stripped pigtail wires to the terminals, as well.

Finally, I bolted the new caps into the circular carriers and screwed them back into the chassis. The screw holes didn't line it perfectly so I had to do some jiggering to get them to fit. That was frustrating but I got through it.

Once installed, I soldered the pigtails to their respective chassis wires and applied shrink tubing with a heat gun for insulation. For the "two into one" connection, the shrink tubing didn't



completely shrink down over the bulky soldered connection so I finished insulating it with a dab of hot melt glue.

Now, the Moment of Truth had arrived. I connected a dummy load and fired up the transceiver – power on, heater on. Ah ha -- no popping, sparking or smoke. What a relief! So far so good.

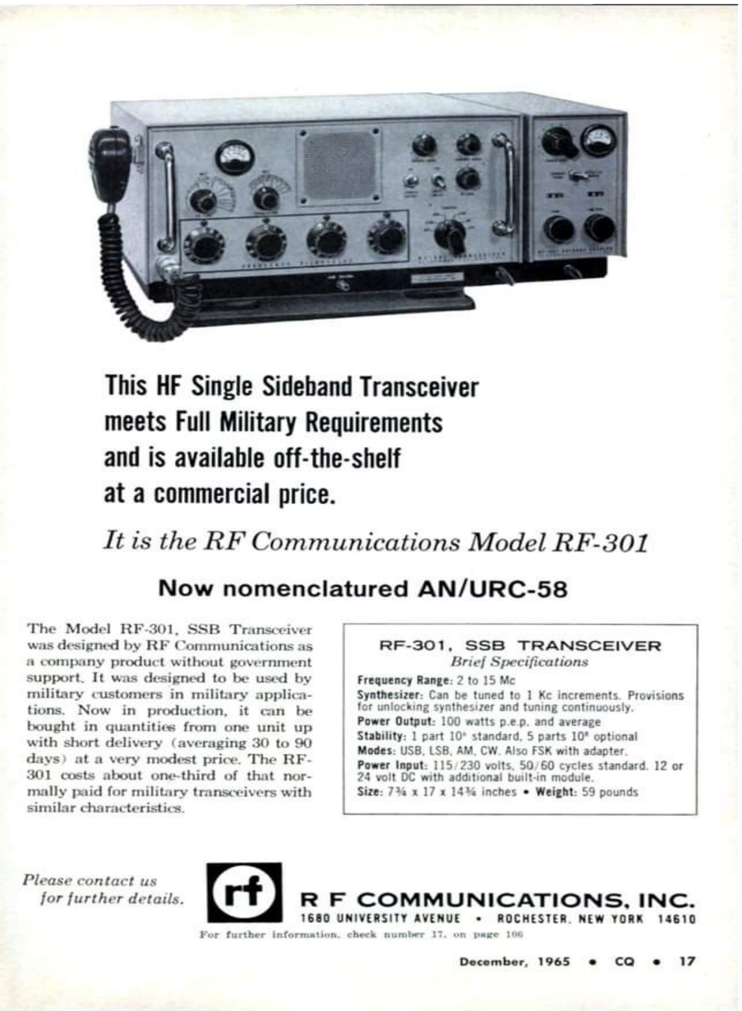
I ran through the tune up procedure on several bands and the meter needle moved as it should. Peak, Dip, Peak, Dip... I got 225ma on the meter so, preliminarily it looks like this is a winner.

At the time of this writing we are approaching Winter solstice and it's frosty outside, I haven't had an opportunity to set up the antenna, connect it and test the transceiver. That's next and I'm optimistic.

Hopefully this will inspire those of you that may want to breath new life into that old boat anchor that is collecting dust in your closet. Anyone familiar with these Kenwood hybrids knows they were and still are great radios. Although more modern versions are in widespread use, you can't beat the learning experience and satisfaction of restoring your old rig.

If you have questions for comments, I can be reached at W9HR@outlook.com.

-Doug W9HR



This HF Single Sideband Transceiver meets Full Military Requirements and is available off-the-shelf at a commercial price.

It is the RF Communications Model RF-301

Now nomenclatured AN/URC-58

The Model RF-301, SSB Transceiver was designed by RF Communications as a company product without government support. It was designed to be used by military customers in military applications. Now in production, it can be bought in quantities from one unit up with short delivery (averaging 30 to 90 days) at a very modest price. The RF-301 costs about one-third of that normally paid for military transceivers with similar characteristics.

RF-301, SSB TRANSCEIVER
Brief Specifications

Frequency Range: 2 to 15 Mc
Synthesizer: Can be tuned to 1 Kc increments. Provisions for unlocking synthesizer and tuning continuously.
Power Output: 100 watts p.e.p. and average
Stability: 1 part 10^6 standard, 5 parts 10^8 optional
Modes: USB, LSB, AM, CW. Also FSK with adapter.
Power Input: 115/230 volts, 50/60 cycles standard. 12 or 24 volt DC with additional built-in module.
Size: 7¾ x 17 x 14¾ inches • **Weight:** 59 pounds

Please contact us for further details.

R F COMMUNICATIONS, INC.
1680 UNIVERSITY AVENUE • ROCHESTER, NEW YORK 14610

For further information, check number 17, on page 106

December, 1965 • CQ • 17

Skywarn Spotter Training - Johnson County

When ---Thursday, April 13, 6pm – 8pm
Where --- Johnson County Sheriffs Training Center - 1061 Hospital Rd., Franklin, IN 46131
Description --- Public Spotter Training **--- No preregistration required**

Frequently Asked Questions about Spotter Training Sessions

1. Do I need to preregister for these sessions? **Most of the time, no. All you need to do is arrive at the proper time and location.** *However, in rare instances, a county might request registration with their officials. Check the details of the session to see if preregistration is required.*

2. About how long do the sessions last? **Approximately 2 hours.**

3. Do I have to live / be a spotter in the county that I take the training session? **No. The training sessions are identical.**

4. Is there a fee to attend? **There is no fee to attend.**

The Amateur's Code

The radio amateur is:

CONSIDERATE...never knowingly operates in such a way as to lessen the pleasure of others.

LOYAL...offers loyalty, encouragement, and support to other amateurs, local clubs, and the American Radio Relay League, through which amateur radio in the United States is represented nationally and internationally.

PROGRESSIVE...with knowledge abreast of science, a well-built and efficient station and operation above reproach.

FRIENDLY...slow and patient operating when requested; offers friendly advice and counsel to the beginner; kind assistance, cooperation, and consideration for the interests of others. These are the hallmarks of the amateur spirit.

BALANCED...radio is an avocation, never interfering with duties owed to family, job, school, or community.

PATRIOTIC...station and skills are always ready for service to country and community.

--The original Radio Amateur's Code was written by Paul M. Segal, W9EEA, in 1928.

This was written over 90 years ago and should be applicable to every operator today. If we're operating on the air or working to mentor a new operator, are we living up to this ideal and passing it along to others?

- Chris, KQ9Y

ARRL VHF/UHF Contest January 21-23, 2023

The annual ARRL January VHF/UHF Contest begins at 1900 UTC January 21 and ends 0359 UTC January 23. All Amateur Radio Service bands from 6 meters and above may be used for the contest. Since most of the Blair County (Pennsylvania) Amateur Radio, intra-county emergency communications support uses the amateur VHF and UHF frequencies, this is a great contest to use as your own personal communications exercise (COMMEX) for your home, mobile, and/or portable VHF and UHF equipment.

There's even an FM-only category on 6 meters through 70 cm. So, you won't need an all-mode radio to play. If you have an all-mode radio though, you'll be able to make more, and more distant, contacts. Speaking of FM, you may only use recognized FM simplex frequencies. Repeater contacts are not allowed.

Not a contester at heart? Use this contest to test your radio grab-and-go and emergency supply kits. With the FM-only category, you could operate from your home station or portable by setting up your grab-and-go kit in your backyard, or on your deck or patio. How well do you and your grab-and-go kit work over the duration of the contest, in the winter? Don't forget power. Can you sustain operations during the contest without using commercial power? Although using emergency power won't get you any extra points in this contest, it's a way you can use the contest to exercise your EMCOMM capabilities. Don't have an emergency supply kit? Go to Ready.gov to learn how to prepare yourself and your family for small emergencies or large-scale disasters. Remember, it takes a while for the government to organize a response to a disaster.

Even here in the United States, it can take 72 hours or more before any government organized relief arrives in a stricken area. In the case of disasters like Katrina and Sandy, some areas didn't see organized government help arrive until weeks later. That's why it's vitally important we are prepared to fend for ourselves at least during that initial 72-hour period. Try operating during the contest with just the provisions of your emergency supply kit. Because the food and water needs to be refreshed regularly anyway, see if your kit will in fact sustain you during the contest. If it doesn't, it means your kit will need to be reevaluated. If you do use the contest for your own COMMEX, please take the time to write an article for your local newsletter -- or QST! -- describing your experience.

Additional details about the contest can be found at the ARRL's January VHF Contest web page. – Blair ARES Alert!, the newsletter of the Blair County, Pennsylvania, Amateur Radio Emergency Service (Emergency Coordinator: Kevin Lear, W3XOX; Editor: Drew McGhee, KA3EJV)

…... ARRL ARES News January 2023

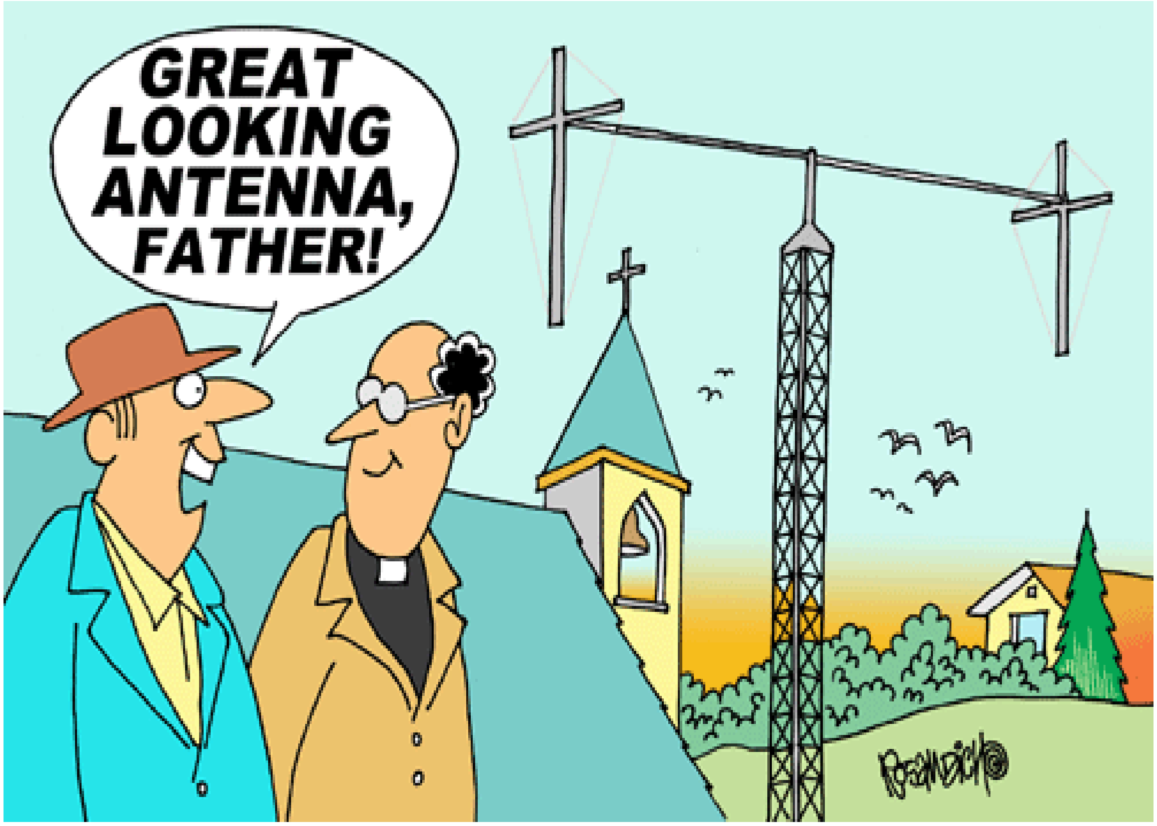
Mark your calendars

MARC Open House - March 18, 2023

Starting at 10:30 am at the MARC radio room 1 Caisson Dr, Franklin.
(Formerly the Franklin Police Station)

- Learn about amateur radio
- See demonstrations of ham radio in operation
- Get your questions about ham radio answered
- Meet local hams
- No age limit, but under 18 must be with a parent/guardian

Volunteers are needed to help with this event. Contact Jim Williams, MARC Public Information Officer, at pio(at)midstatehams.org to volunteer. This will be a major event for the Club, and Jim will need lots of help from members to make it a success.



MID-STATE AMATEUR RADIO CLUB

The Mid-State Amateur Radio Club meets the THIRD SATURDAY of each month at the Johnson County REMC building 750 International Dr. Franklin, IN 46131

See our website, www.midstatehams.org, for maps on how to get to our meeting.

Everyone is welcome; you do not have to be a *HAM* to attend our meetings or a member of the club.

W9MID Repeater:

146.835/
146.235 MHz
(151.4 Hz PL Tone)

Club Officers:

President: Tim Aldridge - WC9G
Vice President: Rhonda Curtis - WS9H
Secretary: Jim Adams – KB9JMU
Treasurer: Jacki Frederick - KI6QOG
Repeater Trustee - Chris Frederick – KQ9Y

W9MID Repeater:

443.525/
448.525 MHz
(151.4 Hz PL Tone) YEASU SYSTEM FUSION (C4FM)

Weekly Net: Sunday evening 7:00 PM ARES/RACES members and ALL RADIO AMATEURS
146.835/146.235 MHz (151.4 Hz PL Tone)

The Official Newsletter of the Mid-State Amateur Radio Club
P.O. Box 836
Franklin, Indiana
46131
Spark Gap Editor: Robert LaGrange N9SIU

Please send your articles to my email: n9siu@yahoo.com no later than the 2nd week of the month.

Thanks to Johnson Co. REMC for the use of their building for meetings and testing.

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